

510,260

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
16 October 2003 (16.10.2003)

PCT

(10) International Publication Number  
**WO 03/085878 A1**

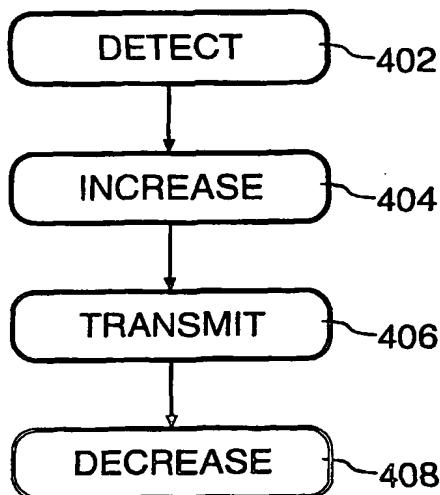
- (51) International Patent Classification<sup>7</sup>: **H04L 1/18**, (74) Agent: **WHITE, Andrew**; Philips Intellectual Property & Standards, Cross Oak Lane, Redhill, Surrey RH1 5HA (GB).  
H04B 7/005
- (21) International Application Number: PCT/IB03/00962
- (22) International Filing Date: 28 February 2003 (28.02.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0208235.2 10 April 2002 (10.04.2002) GB  
0209820.0 30 April 2002 (30.04.2002) GB  
0218395.2 8 August 2002 (08.08.2002) GB
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **MOULSLEY, Timothy, J.** [GB/GB]; Cross Oak Lane, Redhill, Surrey RH1 5HA (GB). **BAKER, Matthew, P., J.** [GB/GB]; Cross Oak Lane, Redhill, Surrey RH1 5HA (GB).

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: COMMUNICATION SYSTEM USING ARQ



(57) Abstract: A communication system comprises a downlink data channel for the transmission of data packets from a primary station to a secondary station and two uplink control channels, a first channel for transmission of status signals to indicate the status of received data packets and a second channel for transmission of pilot information. In operation, on detection (402) of a data packet the secondary station increases (404) the transmission power of the second channel, thereby enabling the primary station to obtain a better estimate of uplink channel properties and hence increase the accuracy with which it can decode the status signal. The secondary station transmits (406) the status signal, typically either an acknowledgement (ACK) or negative acknowledgement (NACK), and decreases (408) the transmission power of the second control channel signal. The increase and decrease in power are not necessarily identical, for example as a result of the effects of power control.



WO 03/085878 A1